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BAYER CROPSCIENCE LP Patent Department 2 T.W. ALEXANDER DRIVE RESEARCH TRIANGLE PARK, NC 27709			EXAMINER FISHER, ABIGAIL L	
			ART UNIT 1616	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

blair.wilson@bayercropscience.com  
pamula.ramsey@bayercropscience.com  
rebecca.hayes@bayercropscience.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/572,719	<b>Applicant(s)</b> VERMEER, RONALD	
	<b>Examiner</b> ABIGAIL FISHER	<b>Art Unit</b> 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11, 14-17, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11, 14-17 and 21-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Receipt of Amendments/Remarks filed on June 24 2009 is acknowledged.

Claims 1-10, 12-13, 18-20 and 23-24 were/stand cancelled. Claim 11 was amended.

Claims 11, 14-17 and 21-22 are pending.

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

### ***Response to Arguments***

Applicant's arguments, see page 7, first paragraph, filed June 24 2009, with respect to the rejection(s) of claim(s) under 103 utilizing the prior art reference Schlatter have been fully considered and are persuasive. Specifically, Schlatter does not teach trisytrylphenol-ethoxlates having the required ethoxylation units. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made. The following represents all new grounds of rejection.

### ***Claim Interpretation***

Claim 11 and the claims that depend from claim 11 contain the transitional language "consisting essentially of". For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." If an applicant contends that

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additional steps or materials in the prior art are excluded by the recitation of “consisting essentially of,” applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. *PPG Industries Inc. V Guardian Industries Corp.* 48 USPQ2d 1351 (Fed. Cir. 1998) and *In re De Lajarte* 337 F.2d 870, 143 USPQ 256 (CCPA 1964) **See MPEP 2111.03.**

The instant specification does not define the term “consisting essentially of” in a manner that would allow one skilled in the art to determine what basic and novel characteristics are being materially affected. The specification of the instant application teaches that the compositions is useful for/has the activity for controlling cereal diseases. This is the same activity described by Grayson and Strom et al. for their compositions.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims

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2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue, and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 11, 14-15, 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grayson (US Patent No. 5393770, cited in the Office action mailed on 3/25/09) as evidenced by Wingert et al. (US Patent No. 5532260) in view of Aven (EP 1023832) and Herold et al. (USPGPUB No. 20030144147).**

### **Applicant Claims**

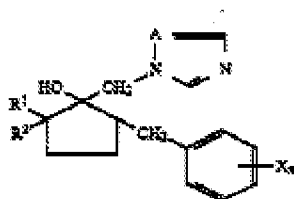
The instant application claims a suspension concentrate consisting essentially of between 10 and 40% by weight, based on the suspension concentrate, of at least one active compound that is solid at room temperature selected from the group consisting of azaconazole, bitertanol, bromuconazole, cyproconazole, diclobutrazole, difenoconazole, diniconazole, epoxiconazole, etaconazole, fenbuconazole, fluquinconazole, flusilazole, flutriafol, hexaconazole, imibenconazole, ipconazole, metconazole, myclobutanil, paclebutrazol, penconazole, propiconazole, prothioconazole, simeconazole, tebuconazole, tetraconazole, triadimefon, triadimenol, triticonazole, azoxystrobin, dimoxystrobin, fluoxastrobin, kresoxim-methyl, metaminostrobin, picoxystrobin, pyraclostrobin, and trifloxystrobin; between 5 and 20% by weight, based on the suspension concentrate, of at least one alkanolethoxylate of formula I; and between 3 and 8% by weight, based on the suspension concentrate of at least one dispersant mixture; between 40 and 65% by weight, based on the suspension

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concentrate of water; and between 0 and 15% by weight, based on the suspension concentrate of one or more additives. The dispersants are selected from the group consisting of the polymers of methyl 2-methyl-2-propenoate and  $\alpha$ -(2-methyl-1-oxo-2-propenyl)- $\omega$ -methoxy-poly(oxy-1,2-ethanediyl), tristyrylphenoethoxylates, and propylene oxide/ethylene oxide block copolymers having molecular weights between 8000 and 10,000.

### **Determination of the Scope and Content of the Prior Art (MPEP §2141.01)**

Grayson is directed to fungicidal compositions. As claimed and exemplified the composition comprises an azole in combination with an alkoxyolate of an aliphatic alcohol (claim 1). Exemplified alkoxyolates are GENAPOL C-050, GENAPOL C-080, GENAPOL C-100 and GENAPOL C-200 (tables 1-4). Suspension concentrates were formed utilizing these ingredients and water (example 1). Suspension concentrates of example 1 additionally comprise dispersants. It is taught that concentrate formulations contain from about 5g/kg to 200 g/kg (0.5 to 20%) of compound of formula I and from about 100 g/kg to about 1000g/kg (10 to 100%) of adjuvant (Genapol compound) with the balance being usual ingredients. Formulations arise from a weight ration in the range of about 5:1 to 20:1 of alkoxyolate adjuvant to compound of formula I (column 4, lines 5-16). The azole has the following formula:



It is taught that it may be desirable to co-apply further compounds such as insecticide, acaricide, herbicide, nematocide or a fertilizer (column 2, lines 66-67).

**Ascertainment of the Difference Between Scope the Prior Art and the Claims  
(MPEP §2141.012)**

Grayson do not teach the incorporation of instantly claimed dispersing agents (component c) or the incorporation of tebuconazole, trifloxystrobin or tebuconazole and trifloxystrobin. However, these deficiency are cured by Aven and Herold et al.

Aven is directed to aqueous suspension concentrates. The compositions comprise 50 to 400 g/L of a crop protection compound, 50 to 500 g/L of an adjuvant and at least one surfactant selected from the group consisting of (c1) 5 to 75 g/L of one or more non-ionic dispersant and (c2) 10 to 100 g/L of one or more anionic dispersants (abstract). Fungicides taught include metconazole, tebuconazole and trifloxystrobin (paragraph 0017). Surfactants/dispersants taught include non-ionic dispersants such as polyethyleneoxide-polypropyleneoxide block copolymers (paragraph 0042). The most preferred are the Pluronic type block copolymers such as Pluronic PE 10500 (paragraph 0043). Anionic dispersants taught include Soprophor FL (table page 10). Both Pluronic PE 10500 and Soprophor FL are exemplified.

Herold et al. is directed to herbicide compositions. It is taught that surfactants can be utilized in these types of compositions for several purposes. Surfactants are used to at least facilitate suspending the active compound in a suspension concentrate by helping to wet and/or disperse the solid particles. Surfactants can lower the surface tension of the water, helping to replace air on the surface of particles with water, thereby suspending the particles. If milling is required, new particle surfaces are created by

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mechanical breaking of the solid particles and surfactant adsorbs onto the particle surface to give rise to fluidity of the suspension (column 4). Dispersants can be used to facilitate preparation of a suspension concentrate. The dispersant can stabilize and maintain a separation between suspended particles and maintain a separation between suspended particle which otherwise may have a tendency to flocculate. Dispersants can provide repulsive forces to balance the tendency to flocculate. Useful dispersants include anionic and nonionic dispersants (paragraph 0054). Exemplified anionic surfactants include tristerylphenol phosphate potassium salt surfactant, Soprophor FLK (paragraph 0058 and table in paragraph 0055). Useful nonionic surfactants include polyoxyalkylene surfactant such as Pluronic L1061 (paragraph 0060, table in paragraph 0055). It is taught that dispersants can be used in a useful amount but usually in an amount from about 2 to about 5 percent (paragraph 0075). Surfactants are utilized in suspension concentrates in an amount from about 0.5 to 1.5 wt. % (paragraph 0074). It is taught that dispersant surfactant combinations include anionic dispersant and nonionic surfactant and nonionic dispersant and anionic surfactant (paragraph 0076).

***Finding of Prima Facie Obviousness Rationale and Motivation  
(MPEP §2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Grayson, Aven and Herold et al. and utilize surfactants/dispersant combinations in the suspension concentrate of Grayson. One of ordinary skill in the art would have been motivated to utilize surfactant/dispersant combinations in suspension concentrates in order to allow for the formation of a stabilized suspension concentration in which flocculation is prevented as taught by



Herold et al. One of ordinary skill in the art would have been motivated to utilize anionic and nonionic dispersant/surfactant combinations as these are two specific combinations taught by Herold et al. as providing the desired effect. Therefore, based on the teachings of Herold et al. one of ordinary skill in the art would have been motivated to utilize a combination of Soprophor FLK and Pluronic PE 10500 which are taught as anionic and nonionic surfactant/dispersants respectively.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Grayson, Aven and Herold et al. and utilize tebuconazole and trifloxystrobin in the invention of Grayson. One of ordinary skill in the art would have been motivated to add these active compounds as the metconazole taught by Grayson has the same function (i.e. fungicide) as tebuconazole and trifloxystrobin as taught by Aven. As a general principle it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, the idea of combining them flows logically from their having been individually taught in the prior art. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) **MPEP 2144.06**.

Regarding the claimed active compound, as evidenced by Wingert et al. (column 2, line 60 and column 4, line 20), the structure of the compound of formula I of Grayson corresponds to the fungicide metconazole.

Regarding the claimed amounts of active and ethoxylate, Grayson et al. teach an amount that overlaps that instantly claimed. In the case where the claimed ranges

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"overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5].**

Regarding the claimed amount of water, Grayson teaches the suspension concentrates contain from about 5g/kg to 200 g/kg (0.5 to 20%) of compound of formula I and from about 100 g/kg to about 1000g/kg (10 to 100%) of adjuvant (Genapol compound) with the balance being usual ingredients. Weight ratios of 5:1 to 20:1 of alkoxylate adjuvant to compound of formula I are utilized. "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages." *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969). Therefore, one of ordinary skill in the art would have been motivated to manipulate the amount of formula I to alkoxylate adjuvant to determine which ratio is optimal and then the resulting amount of water, based on the teachings of Grayson.

Regarding the claimed amount of the dispersants, Herold et al. and Aven teach amounts of surfactants and dispersants that overlap those instantly claimed. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5].**

Regarding the claimed ethoxylate, the instant specification indicates that Genapol C100 is the alkanolethoxylate that possess an m of 11 and n of 10 (page 4). This compound is one exemplified by Grayson.

Regarding the claimed tristyrylphenoethoxylate, the instant specification indicates that Soprophor FLK is a specific tristyrylphenoethoxylate that possess the claimed number of ethoxylate units (page 5).

Regarding the claimed propylene oxide/ethylene oxide block copolymer, Pluronic PE 10500 is taught by the instant specification as possessing the claimed molecular weight and ethoxylation.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

**Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grayson as evidenced by Wingert et al. in view of Aven and Herold et al. and in further view of Mauler-Machnik et al. (US Patent No. 6559136) and Heinemann et al. (WO 9727189).**

#### **Applicant Claims**

The instant application claims the active compounds are prothioconazole and fluoxastrobin.

#### **Determination of the Scope and Content of the Prior Art (MPEP §2141.01)**

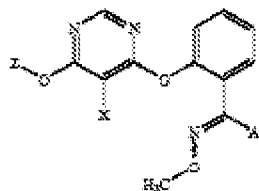
The teachings of Grayson, Aven and Herold et al. are set forth above. Grayson teach compositions comprising GENAPOL compounds and metconazole for effective

fungicidal use. Aven teaches known fungicides which include metconazole, tebuconazole and trifloxystrobin. Aven teaches that dispersants known to be utilized include nonionic and anionic surfactants such as Pluronic PE and Soprophor FL. Herold et al. teaches it is common practice to utilize a combination of a nonionic and anionic surfactant/dispersant in suspended concentrates to decrease flocculation.

**Ascertainment of the Difference Between Scope the Prior Art and the Claims  
(MPEP §2141.012)**

Grayson do not specify that the fungicides fluoxastrobin and prothioconazole can be added. However, this deficiency is cured by Heinemann et al. and Mauler-Machnik et al.

Mauler-Machnik et al. found that utilizing fungicide compounds of general formula I in combination with other fungicides such as tebuconazole (3), metconazole (11), 2-(1-chloro-cyclopropyl)-1-(2-chlorophenyl)-3(5-mercapto-1,2,4-triazol-1-yl)-propan-2-ol (aka prothioconazole) (69) and trifloxystrobin (75) found in columns 1 and 2 and claim 1 have very good fungicidal properties (column 2, lines 60-62). Compounds of Formula I have the following structure:



in which

Z represents optionally substituted phenyl,

X represents halogen and

A represents heterocyclyl  $-\text{COOCH}_3$  or  $-\text{CO}-\text{NH}-$   
 $\text{CH}_3$  and

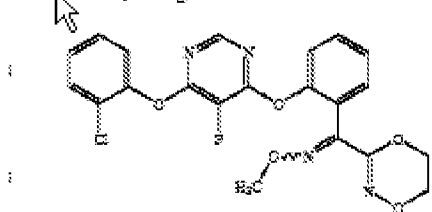
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It is taught that the compounds of the formula I are known for example in WO 9727189 (Heinemann et al.) (column 3, lines 34-35).

Heinemann et al. (wherein US Patent No. 6103717 is serving as the English Language Equivalent) teach the compounds of formula 1 from Mauler-Machnik et al.

One specific compound claimed is:

9. The compound of the formula (I) according to claim 1, which is 3-[1-(2-(4-chlorophenoxy)-5-fluoropyrimidin-6-yloxy)-phenyl]-1-(methoxymino)-methyl)-5,6-dihydro-1,4,2-dioxazine, having the formula:



This compound is fluoxastrobin.

### ***Finding of Prima Facie Obviousness Rationale and Motivation (MPEP §2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Grayson, Herold et al., Aven, Mauler-Machnik et al. and Heinemann et al. and utilize fluoxastrobin and prothioconazole in the invention of Grayson. One of ordinary skill in the art would have been motivated to utilize fluoxastrobin and prothioconazole as Mauler-Machnik et al. teach utilizing generic compounds which encompass fluoxastrobin in combination with metconazole and prothioconazole. Since Mauler-Machnik et al. teach compounds of their formula I can be found in Heinemann et al., one of ordinary skill in the art would look to this patent for specific compounds of formula I. One specific compound taught and claimed is

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fluoxastrobin. Therefore, Mauler-Machnik et al. teach utilizing fluoxastrobin in combination with metconazole and prothioconazole and their combination would have been obvious to one of ordinary skill in the art. As a general principle it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, the idea of combining them flows logically from their having been individually taught in the prior art. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) **MPEP 2144.06**.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

**Claims 11 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strom et al. (US PG PUB No. 20010051175) in view of Stock et al. (Pestic. Sci., 1993).**

#### **Applicant Claims**

The instant application claims a suspension concentrate consisting essentially of between 10 and 40% by weight, based on the suspension concentrate, of at least one active compound that is solid at room temperature selected from the group consisting of azaconazole, bitertanol, bromuconazole, cyproconazole,

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diclobutrazole, difenoconazole, diniconazole, epoxiconazole, etaconazole, fenbuconazole, fluquinconazole, flusilazole, flutriafol, hexaconazole, imibenconazole, ipconazole, metconazole, myclobutanil, paclebutrazol, penconazole, propiconazole, prothioconazole, simeconazole, tebuconazole, tetraconazole, triadimefon, triadimenol, triticonazole, azoxystrobin, dimoxystrobin, fluoxastrobin, kresoxim-methyl, metaminostrobin, picoxystrobin, pyraclostrobin, and trifloxystrobin; between 5 and 20% by weight, based on the suspension concentrate, of at least one alkanolethoxylate of formula I; and between 3 and 8% by weight, based on the suspension concentrate of at least one dispersant mixture; between 40 and 65% by weight, based on the suspension concentrate of water; and between 0 and 15% by weight, based on the suspension concentrate of one or more additives. The dispersants are selected from the group consisting of the polymers of methyl 2-methyl-2-propenoate and  $\alpha$ -(2-methyl-1-oxo-2-propenyl)- $\omega$ -methoxy-poly(oxy-1,2-ethanediyl), tristyrylphenoethoxylates, and propylene oxide/ethylene oxide block copolymers having molecular weights between 8000 and 10,000.

**Determination of the Scope and Content of the Prior Art  
(MPEP §2141.01)**

Strom et al. is directed to aqueous dispersions of agricultural chemicals. Example of active agents that can be utilized include insecticides such as triazoles (paragraph 0012) and fungicides such as azoles such as hexaconazole and strobilurins such as azoxystrobin (paragraph 00130. The surface active agent included may be anionic, cationic or nonionic, or combinations of cationic and nonionic or anionic and nonionic. A stabilizing amount of the surfactant is used, preferably not less than about

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1% and not more than 30% by weight based on the total weight of the water, pesticide and surfactant (paragraph 0014). Specific examples of commercially available surface active agents include Atlox 4991 and 4913 surfactants (nonionic), Pluronic P104 (nonionic), and Soprophor FL surfactant (anionic). The pesticide is in an amount from about 1 to about 60% (claim 1). Exemplified pesticides include epoxiconazole (example 7).

**Ascertainment of the Difference Between Scope the Prior Art and the Claims  
(MPEP §2141.012)**

While Strom et al. teach surfactant combinations of an anionic and nonionic surfactant, Strom et al. do not exemplify utilizing Atlox 4913 in combination with Soprophor FL.

Strom et al. do not teach the incorporation of an alkanolethoxylate. However, this deficiency is cured by Stock et al.

Stock et al. is directed to development of a predictive uptake model to rationalize selection of polyoxyethylene surfactant adjuvants for foliate-applied agrochemicals. Stock teaches that surfactant adjuvants are included routinely in foliate-applied pesticide formulations to enhance their performance (page 233, first paragraph). These adjuvants have two main purposes: (i) as spray modifiers to increase retention and target coverage and (ii) as activators to enhance foliar uptake and biological performance (page 234, first paragraph). Stock et al. investigated what chemical and physical factors influence the surfactant induced foliage uptake of agrochemicals (page 234, second column). The model organic compounds utilized were methylglucose, phenylurea, cyanazine, permethrin and WL110547 (a tetrazole). The model



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compounds covered a log P range of -3.0 to 6.5 (page 234, section 2.2 and table 1).

The surfactants utilized were alcohol ethoxylates with increasing ethylene oxide content ranging from 6 to 20. The alcohol portion is a C<sub>13</sub>/C<sub>14</sub> (page 234, section 2.3). It was found that the ethylene oxide content had a significant influence on the magnitude of uptake activation of the five model compounds with E15 and E30 having the greater uptake (page 236, section 3.1 and tables 3-6). The other influence is concentration. Figures 1-5 show the influence of ethylene oxide (E) content and surfactant concentration on the uptake of the compounds. All of the surfactants increased uptake for all of the model compounds tested. Concentrations utilized were 0.2, 1 and 5 g/L (this is diluted form).

***Finding of Prima Facie Obviousness Rationale and Motivation  
(MPEP §2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Strom et al. and Stock et al. and utilize an ethoxylate alcohol as an surfactant adjuvant in order to enhance foliar uptake. One of ordinary skill in the art would have been motivated to add an ethoxylated alcohol as Stock et al. teach that these surfactants are routinely included in pesticide formulations to enhance their performance and the inclusion of these adjuvants enhanced the absorbance of a variety of compounds regardless of the log P. Therefore, one of ordinary skill in the art would have been motivated to add ethoxylate alcohols to the formulation of Strom et al. to enhance absorbance of the pesticides based on the teachings of Stock et al.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Strom et al. and Stock et al. and utilize an anionic and nonionic surfactant in combination together such as Atlox 4913 and Soprophor FL. One of ordinary skill in the art would have been motivated to utilize a combination of an anionic and nonionic surfactant as this is one specific combination taught as being suitable. Atlox 4913 is a specifically taught commercially available nonionic surfactant and Soprophor FL is a specifically taught commercially available anionic surfactant. Therefore, it would have been obvious to one of ordinary skill in the art to utilize these specifically taught surfactants in a specifically taught surfactant combination.

Regarding the claimed amount of active compound, water and dispersant mixture, Strom et al. teach an amount that overlaps that instantly claimed. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5].**

Regarding the claimed amount of the alcohol ethoxylate, Stock et al. teach that manipulation of the ethoxylate content as well as concentration effect the absorbance of the agrochemicals. Since the desired amount in the dilute form ranges from 0.2 to 5 g/L, it would have been obvious to one of ordinary skill in the art to vary the amount of the ethoxylate in order to achieve the desired absorbance. The amount of a ethoxylate in a composition is clearly a result effective parameter that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ and reasonably

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would expect success. It would have been customary for an artisan of ordinary skill to determine the optimal amount of ethoxylate to add in order to best achieve the desired absorbance. It would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable ranges that produce expected results. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).

Regarding the claimed length of the alkanolethoxylate, Stock et al. teach an amount that overlaps that instantly claimed with specific examples falling within the instant claimed range. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5].**

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

**Claims 14-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strom et al. in view of Stock et al. and in further view of Aven.**

#### **Applicant Claims**

The instant application claims the active compound is tebuconazole or a combination of tebuconazole and trifloxystrobin.

**Determination of the Scope and Content of the Prior Art  
(MPEP §2141.01)**

The teachings of Strom et al. and Stock et al. Strom et al. is directed to aqueous dispersion comprising active compounds which include triazoles such as epoxiconazole and hexaconazole. The active ingredients are combined with surfactant combinations and water to form pesticidal compositions. Stock et al. teach that the addition of surfactant adjuvants such as ethoxylated alcohols enhance absorption of agrochemicals.

**Ascertainment of the Difference Between Scope the Prior Art and the Claims  
(MPEP §2141.012)**

While Strom et al. teach that triazoles can be incorporated, Strom et al. do not teach the incorporation of tebuconazole or tebuconazole and trifloxystrobin. However, this deficiency is cured by Aven.

Aven is directed to aqueous suspension concentrates. The compositions comprise 50 to 400 g/L of a crop protection compound, 50 to 500 g/L of an adjuvant and at least one surfactant selected from the group consisting of (c1) 5 to 75 g/L of one or more non-ionic dispersant and (c2) 10 to 100 g/L of one or more anionic dispersants (abstract). Fungicides taught include metconazole, epoxiconazole, hexaconazole, tebuconazole and trifloxystrobin (paragraph 0017). Surfactants/dispersants taught include non-ionic dispersants such as polyethyleneoxide-polypropyleneoxide block copolymers (paragraph 0042). The most preferred are the Pluronic type block copolymers such as Pluronic PE 10500 (paragraph 0043). Anionic dispersants taught

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include Soprophor FL (table page 10). Both Pluronic PE 10500 and Soprophor FL are exemplified.

***Finding of Prima Facie Obviousness Rationale and Motivation***  
***(MPEP §2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Strom et al., Stock et al. and Aven and utilize tebuconazole and trifloxystrobin in the invention of Strom et al. One of ordinary skill in the art would have been motivated to add these active compounds as Strom et al. teach that triazoles can be included and the taught triazoles (epoxiconazole and hexaconazole) have the same function (i.e. fungicide) as tebuconazole and trifloxystrobin as taught by Aven. As a general principle it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, the idea of combining them flows logically from their having been individually taught in the prior art. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) **MPEP 2144.06**.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

**Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grayson as evidenced by Strom et al. in view of Stock et al. and in further view of Mauler-Machnik et al. and Heinemann et al.**

### **Applicant Claims**

The instant application claims the active compounds are prothioconazole and fluoxastrobin.

### **Determination of the Scope and Content of the Prior Art (MPEP §2141.01)**

The teachings of Strom et al. and Stock et al. Strom et al. is directed to aqueous dispersion comprising active compounds which include triazoles such as epoxiconazole and hexaconazole. The active ingredients are combined with surfactant combinations and water to form pesticidal compositions. Stock et al. teach that the addition of surfactant adjuvants such as ethoxylated alcohols enhance absorption of agrochemicals.

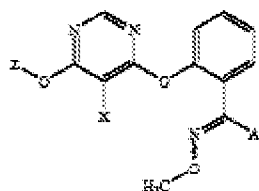
### **Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)**

Strom et al. do not specify that the fungicides are fluoxastrobin and prothioconazole can be added. However, this deficiency is cured by Heinemann et al. and Mauler-Machnik et al.

Mauler-Machnik et al. found that utilizing fungicide compounds of general formula I in combination with other fungicides such as tebuconazole (3), epoxiconazole (10), metconazole (11), 2-(1-chloro-cyclopropyl)-1-(2-chlorophenyl)-3(5-mercapto-1,2,4-triazol-1-yl)-propan-2-ol (aka prothioconazole) (69) and trifloxystrobin (75) found in

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columns 1 and 2 and claim 1 have very good fungicidal properties (column 2, lines 60-62). Compounds of Formula I have the following structure:



in which

Z represents optionally substituted phenyl,

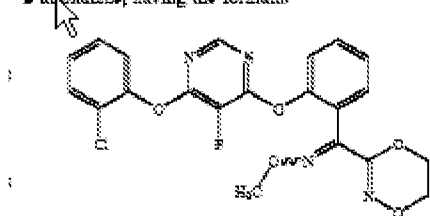
X represents halogen and

A represents heterocyclyl —COOCH<sub>3</sub> or —CO—NH—CH<sub>3</sub> and

It is taught that the compounds of the formula I are known for example in WO 9727189 (column 3, lines 34-35).

Heinemann et al. (wherein US Patent No. 6103717 is serving as the English Language Equivalent) teach the compounds of formula 1 from Mauler-Machnik et al. One specific compound claimed is:

8. The compound of the formula (I) according to claim 1, which is 3-{1-[2-(4-chlorophenoxy)-5-fluoropyrimidin-6-yl]oxy}-phenyl-1-(methoxycarbonyl)-methyl}-5,6-dihydro-1,4,2-dioxazine, having the formula:



This compound is fluoxastrobin.

***Finding of Prima Facie Obviousness Rationale and Motivation  
(MPEP §2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Strom et al., Stock et al., Mauler-Machnik et al. and Heinemann et al. and utilize fluoxastrobin and prothioconazole in the invention of Strom et al. One of ordinary skill in the art would have been motivated to utilize fluoxastrobin and prothioconazole as Mauler-Machnik et al. teach utilizing generic compounds which encompass fluoxastrobin in combination with epoxiconazole and prothioconazole. Since Mauler-Machnik et al. teach compounds of their formula I can be found in Heinemann et al., one of ordinary skill in the art would look to this patent for specific compounds of formula I. One specific compound taught and claimed is fluoxastrobin. Therefore, Mauler-Machnik et al. teach utilizing fluoxastrobin in combination with epoxiconazole and prothioconazole and their combination would have been obvious to one of ordinary skill in the art. As a general principle it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, the idea of combining them flows logically from their having been individually taught in the prior art. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) **MPEP 2144.06**.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.



***Conclusion***

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABIGAIL FISHER whose telephone number is (571)270-3502. The examiner can normally be reached on M-Th 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abigail Fisher  
Examiner  
Art Unit 1616

AF

*/Mina Haghighatian/*  
Primary Examiner, Art Unit 1616